

interpretations of the claims and also be deleted from the final published version of the claims. Accordingly, in addition to supplying the claims on separate pages, a preliminary amendment is being made here only to remove the bold-bracketed text of the claims as shown immediately below. This change does not in any way relate to patentability.

IN THE CLAIMS (Marked-up changes)

~~[Note: Bold bracketed **and size-reduced cross-referencing text** (e.g., {400}) is provided in the below claims as an aid for readability and for finding corresponding (but not limiting) examples of support in the specification. The so bracketed text is not intended to add any limitation whatsoever to the claims and should be deleted in all legal interpretations of the claims and should also be deleted from the final published version of the claims.]~~

1. (Currently amended) An isolation providing method comprising:
 - (a) defining {302} a first oxidation stop layer {335} above a first conductively-doped semiconductor layer {330};
 - (b) providing {303} a first intrinsic silicon layer {344} on the first oxidation stop layer;
 - (c) oxidizing {304} at least a sublayer portion {343} of the first intrinsic silicon layer so as to thereby create a corresponding and thermally-grown, first intrinsic silicon oxide sublayer {343} over the first semiconductor layer; and
 - (d) disposing {309} a second conductively-doped semiconductor layer {350} above the first intrinsic silicon oxide sublayer so that the first intrinsic silicon oxide sublayer provides isolation between the first and second conductively-doped semiconductor layers.

2. (Original) The isolation providing method of Claim 1 wherein:
(c.1) said thermally-grown, first intrinsic silicon oxide sublayer includes stoichiometric silicon dioxide (SiO_2).
3. (Currently amended) The isolation providing method of Claim 1 wherein:
(b.1) said providing of the first intrinsic silicon layer includes using atomic layer deposition (ALD) to define a thickness ~~{z₈}~~ of the first intrinsic silicon layer.
4. (Currently amended) The isolation providing method of Claim 3 wherein:
(b.2) said thickness ~~{z₈}~~ of the first intrinsic silicon layer is in a range of about 15Å to about 50Å.
5. (Original) The isolation providing method of Claim 4 wherein:
(a.1) said defining of the first oxidation stop layer includes creating a first silicon nitride composition having a nitrogen concentration of at least about 5% atomic.
6. (Original) The isolation providing method of Claim 5 wherein:
(a.1a) said first silicon nitride composition has a nitrogen concentration of at least about 10% atomic.
7. (Currently amended) The isolation providing method of Claim 5 wherein:

(a.2) said creating of the first silicon nitride composition includes using Decoupled Plasma Nitridation (DPN) to introduce nitrogen into the first conductively-doped semiconductor layer ~~{330}~~.

8. (Currently amended) The isolation providing method of Claim 5 wherein:

(a.2) said creating of the first silicon nitride composition includes using Remote Plasma Nitridation (RPN) to introduce nitrogen into the first conductively-doped semiconductor layer ~~{330}~~.

9. (Currently amended) The isolation providing method of Claim 5 wherein:

(a.2) said creating of the first silicon nitride composition includes using ion implant to introduce nitrogen into the first conductively-doped semiconductor layer ~~{330}~~.

10. (Currently amended) The isolation providing method of Claim 1 and further characterized by:

(c.1) continuing ~~{305}~~ said oxidizing of the first intrinsic silicon layer at least until a corresponding first oxidation front ~~{342}~~ crosses into the first oxidation stop layer ~~{335}~~ so as to thereby perfect formation of silicon dioxide in the thermally-oxidized, first intrinsic silicon layer ~~{343}~~.

11. (Currently amended) The isolation providing method of Claim 10 and further characterized by:

(c.2) continuing ~~[306]~~ said oxidizing of the first intrinsic silicon layer yet further so as to consume silicon atoms within the first oxidation stop layer ~~[335]~~ and so as to thereby produce additional silicon oxide ~~[344]~~ from the consumed silicon atoms.

12. (Currently amended) The isolation providing method of Claim 10 and further comprising:

(e) providing ~~[307]~~ a silicon nitride layer ~~[345]~~ between the first and second conductively-doped semiconductor layers so that the combination of the silicon nitride layer ~~[345]~~ and the perfected silicon dioxide in the thermally-oxidized, first intrinsic silicon layer ~~[343]~~ provide isolation between the first and second conductively-doped semiconductor layers.

13. (Currently amended) The isolation providing method of Claim 12 and further comprising:

(f) providing ~~[308]~~ a second silicon oxide layer ~~[346]~~ between the silicon nitride layer ~~[345]~~ and the second conductively-doped semiconductor layer so that the combination of the second silicon oxide layer, the silicon nitride layer ~~[345]~~ and the perfected silicon dioxide in the thermally-oxidized, first intrinsic silicon layer ~~[343]~~ provide isolation between the first and second conductively-doped semiconductor layers.

14. (Currently amended) The isolation providing method of Claim 1 and further comprising:

(e) providing ~~[307]~~ a silicon nitride layer ~~[345]~~ between the first and second conductively-doped semiconductor layers so that the combination of the silicon nitride layer ~~[345]~~ and the first intrinsic silicon oxide sublayer ~~[343]~~ provide isolation between the first and second conductively-doped semiconductor layers.

15. (Currently amended) The isolation providing method of Claim 14 and further comprising:

(f) providing ~~[308]~~ a second silicon oxide layer ~~[346]~~ between the silicon nitride layer ~~[345]~~ and the second conductively-doped semiconductor layer so that the combination of the second silicon oxide layer, the silicon nitride layer ~~[345]~~ and the first intrinsic silicon oxide sublayer ~~[343]~~ provide isolation between the first and second conductively-doped semiconductor layers.

16. (Currently amended) An insulating structure comprising:

(a) an oxidation stop layer ~~[335]~~; and

(b) a thermally-grown, intrinsic, silicon oxide layer ~~[343]~~ which has been grown from ALD deposited intrinsic, silicon ~~[344]~~ that had been deposited on said oxidation stop layer.

17. (Currently amended) The insulating structure of Claim 16 wherein:

(a.1) said oxidation stop layer ~~[335]~~ includes a nitrated surface of a floating gate electrode ~~[330]~~.

18. (Currently amended) The insulating structure of Claim 16 wherein:
(a.1) said oxidation stop layer [335] includes a silicon nitride composition having at least 5% atomic concentration of nitrogen.
19. (Currently amended) The insulating structure of Claim 18 wherein:
(a.1) said oxidation stop layer [335] has a thickness of no less than about 5Å and no more than about 30Å.
20. (Currently amended) The insulating structure of Claim 19 wherein:
(b.1) said thermally-grown, intrinsic, silicon oxide layer [343]- has a thickness of no less than about 30Å and more than about 100Å.
21. (Currently amended) The insulating structure of Claim 16 wherein:
(b.1) said thermally-grown, intrinsic, silicon oxide layer [343]- has a thickness of no less than about 30Å and more than about 100Å.

The above, non-substantive changes are incorporated into the attached, substitute specification pages. A telephone call from the LIE is respectfully requested to the below-named Applicant's representative if needed to facilitate processing of this response.

It is noted that the Declaration of inventor Chuck Jang was not included with the original filing. It is submitted herewith. Please charge any necessary surcharges for such submission to Deposit Account No. 50-2257 .

Request for Entry, Examination and Allowance

Entry and examination are respectfully requested for the amended application.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 50-2257 for any matter in connection with this response, including any fee for extension of time and/or fee for additional claims, which may be required. If any extension of time is deemed necessary to keep the application pending, it is hereby requested.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on February 26, 2004.

 2-26-2004
Attorney for Applicant(s) Date of Signature

Respectfully submitted,



Gideon Gimlan
Attorney for Applicant(s)
Reg. No. 31,955

MacPherson Kwok Chen & Heid LLP
1762 Technology Drive, Suite # 226
San Jose, CA 95110
Tel: (408) 392-9250